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Emergency Management Guide

ADMINISTRATION AND TRAINING

VOLUME V

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Department of Energy
Office of Emergency Management
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and National Security

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1. PROGRAM ADMINISTRATION

1.1 Introduction

The purpose of program administration is to establish and maintain effective organizational management and control of the emergency management program. Each DOE organizational tier (Cognizant Secretarial Officer [CSO], operations/field office, and site/facility) has one position responsible for administering the emergency management program at that level. For effective program management, administrators are given authority and resources commensurate with the responsibility to develop, implement, and maintain an integrated and comprehensive emergency management program.

Emergency management program administrators should use this guidance and that of other chapters in this document to define their responsibilities and identify activities they should implement to assure emergency **planning** and **preparedness** commensurate with facility hazards will result in an effective **response** should an emergency occur.

This chapter describes the responsibilities at the facility, site, operations/field office and Headquarters levels for the emergency management program administrator. It also discusses the documentation necessary to support the emergency management program and the procedures necessary for administering the program.

Base Program. Minimum requirements for Program Administration peculiar to the Base Program are not specified in the Order, rather, as with the Operational Emergency Hazardous Material Program, the reader is directed to the discussion of Program Administration in Chapter XI of the Order. The guidance provided in this chapter should be used to characterize the general duties and responsibilities of the emergency management administrator of the Base Program. The designated individual should develop and maintain the emergency plan, develop the Emergency Readiness Assurance Plan (or contributions to one) and its annual updates, develop and conduct training and drills (or ensure its performance in another program such as General Employee Training), coordinate the exercise program and evaluation/assessment activities, develop related documentation, and coordinate emergency resources. For a minimal Base Program, it is expected that performance of these duties would be assigned as a collateral duty.

1.2 Responsibilities

The Managers/Administrators at each of the facility, site, operations/field office, and Headquarters levels retain overall responsibility for emergency management at their level. However, responsibility for the day-to-day development, operation, and maintenance of the emergency management program should be delegated to a specifically designated emergency management program administrator. The program administrator should implement a site/facility/activity - specific comprehensive emergency management program that is based upon a graded approach, and commensurate with the hazards. The primary responsibilities of the program administrator at each echelon are discussed below.

1.2.1 Facility

The major program administration tasks at the facility level involve the development (or coordination of development) and maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records. All program administrators must establish an Operational Emergency Base Program that coordinates and integrates the emergency planning and preparedness requirements of applicable Federal, state, and local laws, regulations, and ordinances and other DOE orders. If warranted, program administrators must expand on this Base Program to implement additional emergency management activities.

A fundamental and principle responsibility of the facility emergency management program administrator is to ensure the development and updating of the Hazards Survey and Hazards Assessment, which is the basis for establishing the scope of the Emergency Management System, including its elements. Development and updating of the Hazards Survey and Hazards Assessment may be a complex, multi-disciplinary activity which may involve a considerable number of people in a variety of working groups, coordinated by the emergency management program administrator. Volume II should be used by the program administrator in guiding this effort.

Using the results and conclusions of the Hazards Survey and Assessment, the program administrator should coordinate the development of Emergency Management System elements as described elsewhere in these volumes, the emergency plan, and the implementing procedures for the Operational Emergency Base Program and the Hazardous Materials Program, as applicable. As with the Hazards Survey and Assessment, this activity may require the involvement of personnel from a variety of technical areas. The program administrator should keep in mind that emergency plans and

implementing procedures must be coordinated to ensure that they are consistent with both DOE policies and the plans and procedures developed at other levels.

Another significant task for the emergency management program administrator is preparation of the emergency readiness assurance plan (ERAP) on an annual basis. Guidance on this topic may be found in Volume V, Chapter 3.

Training must be coordinated to ensure the most effective use of resources. Drills and exercises must be coordinated to prevent conflict with other activities and to ensure that resources are available.

The emergency management program administrator is also responsible for the development, maintenance, and update of mutual aid agreements/memoranda of agreement/memoranda of understanding (MAAs/MOAs/MOUs) relevant to a comprehensive and effective emergency management program. These MAAs/MOAs/MOUs could involve support from offsite organizations or, on a multiple facility site, support from other contractors. On a multiple facility site, MAAs/MOAs/MOUs with offsite organizations should be developed, maintained, and updated by the site emergency management program administrator and are typically maintained as a part of the site emergency plan.

Several elements of the emergency management program, for example training, drills, and exercises, require the development, maintenance, and updating of auditable records. This documentation should be a responsibility of the emergency management program administrator. Using training and drill records as an example, the following record-keeping guidelines apply:

- Training and drill records will enable the emergency management program administrator to determine the types of training to be scheduled, the numbers of people to be trained, and the specific individuals to be trained. Exercise records will enable the emergency management program administrator to ensure that individual members of the emergency response organization demonstrate their proficiency annually. Lessons learned from evaluations of exercises should enable the emergency management program administrator to identify areas requiring additional training or requiring changes to the emergency plan and implementing procedures.

- These records should enable the program administrator to effectively manage the emergency management program and also provide auditable records for program assessments and appraisals by oversight organizations.

1.2.2 Site

On a multiple facility site, the emergency management program administrator is responsible for tasks similar to those of the facility program administrator discussed above (or for all tasks if sole administrator). The site administrator is also responsible for review and oversight of emergency management activities of the facility administrators. The site program administrator should assure that guidance to facility emergency planners on methodology, content, and format of various documents is prepared to ensure an effective, integrated site program is achieved when the facility pieces are activated for a coordinated response.

Development and Coordination Tasks.

(1) On a multiple facility site, emergency response activities should be normally conducted within the context of the entire site. The site Hazards Survey and Hazards Assessment, which are the basis for the site emergency plan and implementing procedures, should be developed by integrating the facility-specific documents. The site emergency management program administrator should coordinate the activities of the variety of working groups necessary to develop, maintain, and update an integrated site Hazards Survey and Hazards Assessment.

(2) Based on the site Hazards Survey and Hazards Assessment, the site program administrator should coordinate the development, maintenance, and updating of the site emergency plan and implementing procedures.

(3) The site emergency management program administrator should coordinate submittal of site documents such as the site Emergency Plan, and the site ERAP, which describes the overall site program and summarizes the program described in the facility ERAPs.

(4) Negotiation of written MAAs/MOAs/MOUs with offsite response or support organizations should be coordinated by the site emergency management program administrator. The site program administrator may also facilitate the preparation of MAAs/MOAs/MOUs that may be required between various facilities or contractors on the site.

(5) The site program administrator must ensure the development and maintenance of auditable records similar to those that must be developed and maintained by the facility program administrators. However, an additional responsibility of the site program administrator is to develop a system that ensures that site records are consistent with those maintained at the facilities. One component of this system is a method of ensuring that facility administrators update site records periodically.

(6) The site program administrator should ensure that root cause investigations and corrective action programs to prevent recurrence are initiated for emergencies within the administrator's cognizance.

(7) The site program administrator should integrate emergency public information planning with the development and maintenance of the site emergency plan. The site program administrator should coordinate this effort with the efforts of site and field element public affairs offices.

Review of Facility Emergency Management Program Administrator Activities. The site emergency management program administrator should oversee and coordinate the emergency management activities of the facility emergency management program administrators.

(1) The site emergency management program administrator will ensure that all documents, such as emergency plans and implementing procedures, developed by the facility emergency management program administrators are consistent with both DOE policies and other site documents.

(2) The site program administrator should ensure that the evaluation of exercises conducted by the facilities onsite is accomplished by knowledgeable, independent organization(s).

(3) The site program administrator should emphasize and ensure integration of facility-level plans when developing sitewide plans, procedures, and organizations. Although the line managers within DOE retain their assigned responsibilities, authority for program administration may be delegated.

(4) To assure a quality emergency management program, an internal assessment of all aspects of a facility's or site's emergency management program should be conducted annually by persons with knowledge of the program or response activity being assessed. These assessments will be the basis for improvements which

should be integrated into the emergency management system. The site program administrator should coordinate the scheduling of evaluations, appraisals, and assessments by external organizations. The site program administrator should coordinate the site response to all emergency management system assessment findings.

(5) The site program administrator should establish and maintain a corrective action program that establishes an integrated site plan for corrective actions, tracks corrective actions, and validates the adequacy of corrective actions resulting from the annual program assessment. The program should also include specific findings from training, drills, exercises, and particularly those from actual responses. Program administrators should maintain an open door policy for employee concerns regarding emergency management.

(6) The site emergency management program administrator and facility planners should meet with local emergency planning officials on an annual basis or upon significant program change to ensure their collective understanding of the site emergency plan and emergency plan implementing procedures as the documents affect their activities, particularly in the area of emergency categories, classifications, notifications, and protective action recommendations.

1.2.3 Operations/Field Office

The operations/field office emergency management program administrator should review the activities of the sites and any facilities reporting to the operations/field office. These responsibilities include the following tasks.

(1) Since the Hazards Survey and Hazards Assessment for sites/facilities/activities are the basis of the entire emergency management program, the operations/field office emergency management program administrator should ensure that Hazards Surveys and Hazards Assessments are adequately performed, documented, and updated.

(2) The operations/field office program administrator should review and recommend approval of the Emergency Planning Zone (EPZ) basis documents developed by sites/facilities.

(3) The operations/field office program administrator should oversee the preparation and annual update of the site and facility emergency plans and implementing

procedures. While overseeing this activity, the operations/field office program administrator should ensure consistency and ensure that the plans and procedures are integrated within the overall operations/field office emergency management program.

(4) The operations/field office program administrator should review and recommend approval of ERAPs developed by the sites and facilities. Based on the submitted ERAPs, the operations/field office program administrator should lead preparation of the operations/field office ERAP, which will describe the overall operations/field office program and summarize the programs of the sites and facilities reporting to the operation/field office.

(5) The operations/field office program administrator should assess the area/site/project and facility/site emergency management programs to verify compliance with DOE directives and policy, and that the results/conclusions are provided to the cognizant CSO. These assessments are to be conducted at least once every three years. The program administrator should ensure no more than one external assessment per year.

The operations/field office program administrator should develop and administer the field element emergency management system necessary for the operations/field office to carry out its responsibilities during an emergency. This includes development of the emergency plans and implementing procedures, operations/field office Emergency Management Team training and drills programs, and the operations/field office exercise program; maintenance of operations/field office emergency management records; and program management for and ensuring the operational readiness of the EOC used by the operations/field office during emergencies.

The Field Element program administrator should participate in the negotiation of MAAs/MOAs/MOUs with offsite response or support organizations and recommend approval/signature by the field element line manager directly responsible for execution of the particular agreement. The Field Element program administrator should be the field element principal liaison with the state and local government concerning any offsite emergency planning of the annual emergency response exercises.

1.2.4 Cognizant Secretarial Officer (CSO)

The emergency management program administrator within each Headquarters program element executes essentially the same responsibilities as those of the emergency

management program administrator operations/field office level, although they may oversee a greater range of activities. An additional responsibility of the program element program administrator should be, in coordination with the CSO and the Director of Emergency Management (DEM), to serve as a program specific representative to Federal interagency and committees, DOE committees such as the Emergency Management Advisory Committee (EMAC), working groups, and task forces.

The program administrator should develop contractor performance measures and criteria for field use, in coordination with Operations/Field Offices the DEM, the Assistant Secretary for Environment, Safety, and Health, and the Associate Deputy Secretary for Field Management.

The program administrator should ensure that it has emergency plans and procedures in place, whether its own or as part of an overall DOE Headquarters document, to support and respond to emergencies throughout the DOE complex. Program administrators should ensure that all potential emergency responders are trained and participate in a sufficient number of drills and exercises to assure competency.

1.3 Documentation

The emergency management program administrator for each echelon should ensure that adequate documentation of all technical data, which supports the emergency management program, is maintained. This information generally falls into three categories: technical supporting information, emergency management documents, and records. The program administrator should ensure that up-to-date and controlled, if appropriate, copies are maintained, information is properly distributed, documents are updated when needed or required, and required supporting information is maintained. Technical supporting information includes diagrams, illustrations, maps, procedures, reference documents, and technical documents, such as Probabilistic Risk Assessments, Master Safeguards and Security Agreements, and Material Safety Data Sheets.

In addition to such supporting information, the administrator should maintain those plans and documents which are specifically in the domain of the emergency management system. This category of information includes emergency plans and procedures; specific Hazards Assessments for emergency planning purposes; ERAPs; EPZ documentation; all MOUs; MAAs; and any written agreement with a state, local, tribal, private, or other Federal agency; and all other documents required by the Order or other applicable laws or regulations. Records that are important to maintain in an auditable form include training

records, drill and exercise records, evaluation reports, and records resulting from actual emergencies.

1.4 Administrative Procedures

Filing System. A formal transmittal, distribution, and filing system should be established to ensure that copies of emergency plans, implementing procedures, agreements, and associated documents are up to date and accessible at locations where they may be needed during an emergency for use by appropriate personnel within DOE, contractor organizations, and Federal, state, tribal, and local governments.

Controlled Distribution. Emergency Plans and associated procedures should be handled and disseminated as controlled distribution documents. This enables the emergency management program administrator to ensure that changes and updates are distributed to all organizations maintaining these documents.

Mutual Aid Agreements/Memoranda of Agreement/Memoranda of Understanding (MAAs/MOAs/MOUs). Copies of supporting MAAs/MOAs/MOUs between DOE and state, tribal, and local governments or response organizations should be maintained as an appendix to the emergency plan. Written MAAs/MOAs/MOUs should be developed to ensure that the provision of support during an actual emergency is not dependent on the presence of specific individuals. MAAs/MOAs/MOUs may be mutual support agreements between onsite and offsite response organizations or may require DOE elements or DOE contractor organizations to provide specific training or information in exchange for assistance from offsite organizations.

Delegation of Authority. Line managers at any level, from CSO through facility, may delegate any portion of their authorities to subordinates. Such delegation does not relieve the line manager of the ultimate responsibility for ensuring that the requirements of the Order are met.

Communication and Coordination. The Emergency Management Program Administrator should make every effort to maximize use of the INTERNET system for document and information availability.

1.5 Bibliography

DOE O 151.1. Chg 2 Comprehensive Emergency Management Program. 8-21-96.
Title 36 CFR 1236. *Management of Vital Records.*

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2. STANDARD FORMAT AND CONTENT FOR EMERGENCY PLANS

2.1 Introduction

Emergency Management Programs for each DOE site/facility and Operations/Field Office are documented in an emergency plan, which describes the provisions for responses to Operational Emergencies. Recommended emergency plan format and content for both Operational Emergency Base Programs and Operational Emergency Hazardous Material Programs are provided in this chapter. Every DOE site/facility is required to have a Base Program. A site/facility with no Hazardous Material Program would develop an Emergency Plan for the Base Program; the Base Program requirements for a hazardous material site/facility should be seamlessly integrated with the Hazardous Material Emergency Plan.

Section 2.2 contains a recommended format and content for a Base Program emergency plan. Section 2.3 addresses the format and content of the Hazardous Materials Program emergency plan. Both plans address the same topical and functional areas, but the Base Program plan only explicitly addresses the minimum requirements specified in the Order, while more extensive requirements of the Base Program derived from other sources (e.g., other DOE orders, Federal/state regulations, local ordinances) can be referenced. Base Programs with substantial response requirements (i.e., those having organizational structures and functions similar to a hazardous material program) may use the more detailed plan structure addressed in Section 2.3.

Facilities/sites also have the option of following the National Response Team's guidance on Integrated Contingency Planning, also known as the "One-Plan". The One-Plan is a cooperative effort by the 16 member agencies of the NRT to illustrate how a facility can develop one emergency response plan to address the myriad of emergency planning requirements. Using the One-Plan guidance to address the requirements of DOE O 151.1 and other federal requirements is encouraged. The guidance is available in the Federal Register and on the NRT's web site at http://www.nrt.org.

Base Program. Section 2.2 provides a candidate format and associated content for the Base Program Emergency Plan.

2.2 Operational Emergency Base Program Emergency Plan

EXECUTIVE SUMMARY

Summarize the Emergency Plan by briefly stating its purpose and a description of what is included in each chapter.

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See Figure 2.1.

1. INTRODUCTION

State the overall function and mission of the site. Broadly describe the site and the buildings and facilities within the site. Use maps as appropriate to describe the site. Do not use classified information. State the maximum number of employees in each facility described. Provide facility floor plans where appropriate.

The qualitative Hazards Survey establishes the scope of the Operational Emergency Base Program required at a site by identifying potential hazards, possible consequences, and the applicable emergency planning and preparedness requirements. Include or summarize the results of the Hazards Survey. Describe known hazards originating outside the DOE facility that could affect the health and safety of onsite personnel or other DOE interests.

2. EMERGENCY RESPONSE ORGANIZATION (INTERNAL)

List the individual (e.g., building manager, facility manager, or similar position) who has been assigned to manage and control all aspects of the site/facility planning, preparedness, and response.

3. OFFSITE RESPONSE INTERFACES

Outline any and all coordination with state, tribal, and local agencies and organizations responsible for emergency response and/or protection of the health and safety of the public. If there is no offsite coordination, provide a brief justification statement.

EXECUTIVE SUMMARY

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Figure 2.1. Recommended Format for Operational Emergency Base Program Emergency Plan.

4. EMERGENCY CATEGORIZATION

This section should provide criteria for determining quickly if an event is an Operational Emergency.

5. NOTIFICATIONS AND COMMUNICATIONS

Discuss the required and proceduralized notification process for onsite and offsite notifications for all Operational Emergencies. Specify time limits in which notifications are required and the authority for the time limit. Identify personnel (positions) responsible for both initiating and receiving notifications. Discuss the method of notification (e.g., beepers, telephone). Discuss notification procedure for termination of an incident. Include copies of all notification record forms, particularly those forms used in response to DOE O 232.1 and its successors.

Describe the communications systems and equipment that would be employed by emergency personnel at the site or any specific facility for any notifications, sirens, or warnings to the public, including a description of primary and alternate systems. Discuss communications interface with offsite organizations. Identify what portions of the system are dedicated to the Emergency Management System. Describe the equipment, back-up equipment, readiness assurance, and testing procedures.

6. CONSEQUENCE ASSESSMENT

Since there are no minimum requirements specified for this area, this section may only contain references to consequence assessment types of functional areas required by other orders or regulations.

7. PROTECTIVE ACTIONS AND REENTRY

Describe the procedures to determine personnel accountability and evacuation. Discuss the method and procedures for accountability of onsite personnel and visitors, locations of shelters, and other conditions. Describe access control procedures for evacuated areas. Describe the system to ensure safe shutdown of operations following the declaration of an emergency. Describe the plan and criteria for reentry at each facility, where applicable, for the entire site, and identify all reentry plans.

8. EMERGENCY MEDICAL SUPPORT

Identify onsite medical support, if applicable, as well as offsite medical response agencies and facilities responsible for providing support in normal and mass casualty situations.

9. PUBLIC INFORMATION

List the organization and personnel responsible for providing information to the media during an emergency event.

10. EMERGENCY TERMINATION AND RECOVERY

Detail notifications associated with termination of an Operational Emergency and the criteria for resumption of normal operations.

11. EMERGENCY FACILITIES AND EQUIPMENT

Identify the facility capabilities and specific equipment in place that is used to support an emergency response, including systems and equipment used to notify and evacuate employees.

12. TRAINING AND DRILLS

List all drills and training programs (including fire drills and other building evacuation drills) that are provided to all employees, as well as refresher training for employees who are certified operators or supervisors and those workers who are likely to witness a hazardous material release. List annual testing of all emergency notification equipment.

13. EXERCISES

Describe exercise program. Describe how exercises will be controlled and evaluated and how lessons learned from exercises, improvements, and/or corrective actions are incorporated into emergency planning. List all offsite agencies involved in the exercise program (i.e., Headquarters, other Federal agencies, and local agencies).

14. PROGRAM ADMINISTRATION

State the name, position, mailing address, and telephone number of the Program Administrator at the site or facility level. (This information should also be listed in the appendix which lists the Emergency Management Personnel.) Indicate, where appropriate, whether the Program Administrator has been given emergency management responsibility through delegation of authority.

All facilities are expected to conduct self-assessments annually. Ensure that the procedure for self-assessment is listed in this section.

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List of Tables
List of Acronyms
List of Definitions
Agreements (MOU, MOA, etc)
Maps (site, offsite, buildings, floor plans, etc)
List of Emergency Management Personnel (phone number, position, etc)
References

2.3 Operational Emergency Hazardous Materials Program Emergency Plan

EXECUTIVE SUMMARY

Summarize the Emergency Plan by briefly stating its purpose and a description of what is included in each chapter.

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Figure 2.2. Recommended Format for Operational Emergency Hazardous Materials Program Emergency Plan.

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Figure 2.2. Recommended Format for Operational Emergency Hazardous Materials Program Emergency Plan (continued).

1. INTRODUCTION

1.1 Purpose of Emergency Plan.

State that the purpose of this Emergency Plan is to provide the DOE community with an effective and efficient emergency management operation that will provide acceptable levels of protection. For example, the Emergency Plan provides an efficient and effective response operation that, should an emergency occur, will protect the health and safety of workers, responders, the public, and the environment. State the DOE Orders and legislation that require this plan and that this Emergency Plan satisfies. Describe the operational use of the Emergency Plan and Emergency Plan Implementing Procedures (EPIPs).

1.1.1 Update of Emergency Plan.

State the process and time table for Emergency Plan updates, including required periodic updates and updates made necessary by changes in emergency planning or site operations.

1.1.2 Distribution of Copies.

Identify which organizations, DOE and non-DOE, are to receive copies of the Emergency Plan.

1.2 Scope.

State the types of emergencies, per DOE O 151.1, to which this Emergency Plan applies and does not apply. (Emergency Plans generally are for Operational Emergencies and not Energy or Emergency Assistance emergencies.) Identify the boundaries and define the site to which this Emergency Plan applies (i.e., site emergency plan versus building or facility Emergency Plan).

1.3 Concept of Operation.

Describe the concept on which sitewide emergency planning is based. State the documents, reports, surveys, and assessments used to develop this Emergency Plan, or refer to where this information can be found in the Emergency Plan.

1.4 Site Description.

1.4.1 Overview Site Description.

State the overall function and mission of the site. Broadly describe the site and the buildings and facilities within the site. Use maps as appropriate to describe the site. Do not use classified information.

1.4.1.1 Detailed Facility Description.

In detail, describe the specific facilities that, by the nature of the hazards present, could cause an emergency to be declared. Do not use classified information in the facility description. State the maximum number of employees in each facility described. Provide facility floor plans where appropriate.

1.4.1.2 Hazard Survey and Hazards Assessment.

A Hazards Survey shall be used by the site/facility/activity Emergency Manager to identify the planning requirements addressed in the Operational Emergency Base Program. A DOE site/facility/activity may then be required to establish and maintain a quantitative Hazards Assessment. The quantitative Hazards Assessment analyzes hazards significant enough to warrant consideration in a facility's Operational Emergency Hazardous Material Program.

Include or summarize the results of the Hazards Survey. Describe known hazards originating outside the DOE facility that could impact the health and safety of onsite personnel or other DOE interests.

List and/or summarize the significant radiological and non-radiological hazards present. Describe the system for updating the hazard assessment. The hazard assessment may be included as a separate appendix, if desired or necessary for completeness. Identify technical supporting documents that describe the methodology and information of Hazards Assessments used as the bases for emergency planning.

1.4.1.3 Contractors.

State the major contractors and their contractual commitments and responsibilities.

1.4.2 Physical Attributes of the Site

1.4.2.1 Geography.

Identify the state, county, and any other appropriate local subdivision in which the site is located. Discuss the site location with respect to prominent natural and man-made features such as rivers, lakes, or dams. Describe land use of surrounding area. Discuss any groundwater features. Identify other vital features, such as fault lines or flood plains.

1.4.2.2 Topography and Geology.

Briefly describe the terrain of the site and the surrounding area, including ground cover and elevations. Describe the geology of the site and the surrounding area, particularly as it relates to possible seismic activity.

1.4.2.3 Population Distribution.

Describe the surrounding area (offsite) population, including population density. Provide maps identifying potentially affected onsite population groupings and, based on the most recent census information available, offsite populations to distances of 10 and 50 miles from the site boundary. Discuss projected population growth or change trends and the basis for these projections.

1.4.2.4 Meteorology.

Briefly describe the general climate of the region, including types of air masses, synoptic features (high- and low-pressure systems and frontal systems), general airflow patterns, temperature and humidity, precipitation, and relationships between synoptic-scale atmospheric processes and local meteorological conditions.

1.4.2.5 Natural Phenomena.

Describe seasonal and annual frequencies of severe weather phenomena, including hurricanes, tornadoes, and waterspouts, thunderstorms, lightning, hail, severe drought, and high air pollution potential.

1.4.2.6 Transportation System.

Describe major public and private transportation systems used by employees and the surrounding public. This includes waterways, airports, rail systems, major highways located on, through, and near the site, and major local accesses. Describe any transportation systems operated within the site. Describe any transportation interfaces required for site evacuations.

1.4.2.7 Utility System.

Describe the public and private utility systems used by the site that would be affected by an actual emergency or declaration of an emergency. Describe how the utilities would be affected and the effect on the surrounding population. State and describe any back-up utility systems present and the plan for their use.

2. EMERGENCY RESPONSE ORGANIZATION (INTERNAL)

2.1 Organization Structure.

Generally describe the overall organizational structure of the site and describe in detail the emergency response organization, including its relationship to the overall structure. The use of figures, diagrams, and organization charts may be used to show lines of authority between the various government officials, the emergency manager, and head of various departments. Specifically delineate the functions, authority, and responsibility of all internal organizational elements with emergency responsibilities. Outline the relationship of all emergency organizations to each other, with DOE (field and Headquarters) and other Federal, state, local, and tribal organizations.

2.1.1 Committees.

List all committees with emergency management or emergency planning responsibilities. Describe the purpose and make-up of each committee. Include both onsite and offsite committees in which employees serve either as a working member, a participant, or an observer. List the members, the authority and responsibility of each committee, and the authority and position of each member. State the meeting frequency and any other pertinent details to describe the committee.

2.2 Emergency Direction and Control.

Delineate the site chain of command in the event of an emergency. Discuss the organizational structure, authorities and responsibilities, and roles played by each position. Include an organization chart specifying, at a minimum, the positions responsible for emergency direction and control, both during routine operations and emergency conditions.

2.2.1 Succession of Authority.

State the succession of authority for emergency positions.

2.3 Emergency Management Operations. *Describe the actions and activity for the following.*

Declaration of an emergency
Activation of the EOC
Emergency response
Reentry
Emergency termination

The actions describing the activation of the EOC include the time required for staffing (during both normal duty hours and non-duty hours) and the minimum positions required for activation. Note that this section is not intended to include detailed emergency procedures, which are contained in separate implementing procedures.

2.3.1 Emergency Management Personnel.

Describe each position's emergency management responsibilities, its place in the overall organization, and the authority and responsibility of each position.

3. OFFSITE RESPONSE INTERFACES

3.1 Overview.

Provide an overview of relationships, both formal and informal, with offsite organizations, including other DOE departments and other Federal government, state, local, and tribal organizations with emergency management or emergency planning responsibilities. MAAs, MOAs, and MOUs should be described in this section.

3.2 Other Federal Agencies.

Describe agreements with other Federal agencies, specifying the role of the agency, potential response, regulatory control, and notification chain required. Examples of Federal agencies that may be involved in a DOE response are as follows.

Department of Defense
Defense Special Weapons Agency
U.S. Forest Service
Federal Bureau of Investigation
Federal Aviation Administration
U.S. Coast Guard
U.S. Environmental Protection Agency
Nuclear Regulatory Commission
Federal Emergency Management Agency
National Oceanic and Atmospheric Administration

3.3 State Government

Describe the roles of state organizations with emergency response or regulatory control responsibilities relevant to DOE facilities. Summarize primary and secondary support roles. Describe state emergency plans or procedures with

impact upon the DOE facility or program. Specify the nature of any MAAs, MOAs, or MOUs with the State.

3.4 Local Organizations

Describe the roles of local organizations with emergency response or regulatory control duties as they pertain to DOE facilities. Summarize primary and secondary support roles. Describe local emergency plans or procedures that affect the DOE facility or program. Specify the nature of any MAAs, MOAs, or MOUs with the local authorities.

3.5 Tribal Organizations

Describe the roles of tribal organizations with emergency response or regulatory control responsibilities relevant to DOE facilities. Summarize primary and secondary support roles. Describe tribal emergency plans or procedures that affect the DOE facility or program. Specify the nature of any MAAs, MOAs, or MOUs with the local tribal organizations.

3.6 Private Organizations

Describe the roles of private organizations with emergency response responsibilities relevant to DOE facilities. Summarize primary and secondary support roles. Describe private emergency plans or procedures that affect the DOE facility or program. Specify the nature of any MOAs or MOUs with the local private organizations. Describe any contractual arrangements and annual funding obligations in order to maintain the desired level of emergency preparedness.

3.7 MAAs, MOAs, and MOUs

List all MAAs, MOAs, and MOUs with offsite organizations. Include in the list the parties to the agreement, points of contact, the date of the agreement, and the expiration date of the agreement. Identify all organization(s) responsible for negotiating, executing, and maintaining agreements. Specify where documents are on file, and include copies of the unclassified MAAs, MOAs, and MOUs in an appendix to this Emergency Plan. List all classified MAAs, MOAs, and MOUs, identify unclassified points of contact, and state where the agreement can be viewed.

3.8 Offsite Medical Facilities

Discuss capabilities of local medical centers to support mass casualties and contamination events.

4. EMERGENCY CATEGORIZATION AND CLASSIFICATIONS

4.1 Definitions

State the definitions of Operational Emergencies and emergency classes per DOE O 151.1. In the interest of consistency, the definitions as provided in the DOE Orders can be repeated.

4.2 Criteria for Operational Emergencies Not Requiring Classification

State the criteria used to define an emergency. Briefly describe the methodologies used to develop criteria and reference specific technical supporting documents.

4.3 Emergency Action Levels (EALs)

State the EALs used to define an emergency. Briefly describe the methodologies used to develop EALs and reference technical supporting documents. The EALs should be described for all potential emergencies at the site, including radiological, non-radiological, terrorism, sabotage, fire, explosion, security, and natural phenomena. Describe the criteria for each classification of emergency at the facility or site. Identify personnel (positions) responsible for determining the classification and action level. Discuss level of emergency staffing required at each level. Identify where the complete EALs are kept on file.

5. NOTIFICATIONS AND COMMUNICATIONS

5.1 Notifications

Discuss the required and proceduralized notification process for onsite and offsite notifications for all operational emergencies. Specify time limits in which notifications are required, and the authority for the time limit. Identify personnel (positions) responsible for both initiating and receiving notifications. Discuss the method of notification (e.g., beepers, telephone). Discuss notification procedure for termination of an incident. Discuss the procedure variance for classified

notifications. Include copies of all notification record forms, particularly those forms used in response to DOE O 232.1 and its successors.

5.1.1 Offsite Notifications

State the applicable requirements for notification and communication with appropriate offsite agencies and organizations, including, at a minimum, state government; local government; local fire, police, and medical organizations; private organizations; contractor organizations; other Federal agencies; and any organization for which an agreement of notification has been signed.

5.1.2 Onsite Notifications

Identify personnel (positions) required to be notified for any emergency, specifying any differences for day shift or night shift. Discuss, if appropriate, the duty officer program and specific responsibilities.

5.1.3 DOE Assets

State the notification procedure for requesting DOE radiological emergency response assets, and the specific circumstances under which notification is permitted or required.

5.1.4 Field and Headquarters EOC Notifications

State the circumstances under which the operations/field and/or Headquarters EOCs are notified of an emergency and describe the procedures for notification, including the responsible personnel.

5.2 Communications

Describe the communications systems and equipment employed by emergency personnel at the site or any specific facility for any notifications, sirens, or warnings to the public, including a description of primary and alternate systems. Discuss communications interface with offsite organizations. Identify what portions of the system are dedicated to the Emergency Management System. Describe the equipment, back-up equipment, readiness assurance, and testing procedures. Describe the troubleshooting system for ensuring that problems noted during tests and drills are identified, tracked, and resolved. Reference to

any listing of communication equipment in the Emergency Equipment chapter is acceptable.

5.2.1 Secure Communications

Describe the procedures and plans for communicating classified information.

6. CONSEQUENCE ASSESSMENT

6.1 Consequence Determination

Describe the procedure(s) used to determine the potential consequences based on the results of hazard assessments and input from all other pertinent areas, such as intelligence and meteorologic information. Describe the methodologies used for consequence assessment and reference technical supporting documentation.

6.1.1 Continuous Consequence Determination

Describe the procedures to continually and in real time, where appropriate, monitor an emergency or continuing situation to update the consequence assessment.

6.2 Coordination

Describe the procedure to coordinate with other Federal, state, local, and tribal organizations information necessary to make accurate and timely consequence determinations.

7. PROTECTIVE ACTIONS AND REENTRY

State the purpose and intended use of protective actions. Describe protective actions used at the site and under what circumstances they are implemented.

7.1 Protective Action Guides

List and summarize existing radiological Protective Action Guides. Present the assumptions for the development of protective actions for both offsite and onsite populations. Discuss the process for implementing the protective actions.

Discuss the procedures for ensuring that the protective actions are timely, communicated, safe, and complete. Discuss what constitutes potential protective actions at the site, such as monitoring activities and accounting of personnel. Reference technical supporting documentation if applicable.

7.2 Emergency Response Planning Guidelines (ERPGs)

List and summarize existing ERPGs. Present the assumptions for the development of protective actions for both off and onsite populations. Discuss the process for implementing the protective actions. Discuss the procedures for ensuring that the protective actions are timely, communicated, safe, and complete. Discuss what constitutes potential protective actions at the site, such as monitoring activities and accounting of personnel. Reference technical supporting documentation, if applicable.

7.3 Records

Describe the procedure and the responsible organization to maintain an accurate log of the events of the emergency, including all follow-up health and hygiene surveys. Describe the coordination procedure with medical personnel and facilities. State the length of time and method of storing the records.

7.4 Personnel Accountability/Evacuation

Describe the procedures to determine personnel accountability and evacuation. Discuss the method and procedures for accountability of onsite personnel and visitors, locations of shelters, and other conditions. Discuss provisions for onsite relocation, including conditions likely to cause such a protective action.

Identify notification process and responsibilities. Discuss conditions requiring evacuation (full or partial). Identify onsite evacuation routes and include maps. Discuss the method for accounting for all personnel and visitors. Discuss the method for collecting and housing the evacuated individuals. Describe access control procedures for evacuated areas.

7.5 Reentry

Describe the plan and criteria for reentry at each facility, where applicable, for the entire site, and identify all reentry plans. State and discuss, where appropriate, the criteria for reentering areas under emergency conditions or

which have had access restricted during the emergency. Describe the procedure used to assess damage and/or contamination. Identify personnel, and their relationship to the emergency organization, who can develop, approve, or implement reentry. The plan shall also include methods for protection of workers from hazardous exposure, exposure guides for rescue personnel, facility accessibility, security considerations, access to protective clothing and equipment, availability of medical assistance, and debriefing procedures. Reference technical supporting documentation if applicable. Note that some activities of reentry may be relevant to recovery.

7.6 Emergency Planning Zones (EPZs)

Describe the procedures and/or the predetermined emergency planning zones in determining potentially affected areas. Use maps, as appropriate, for an accurate and complete description. Identify the persons (positions) responsible for determining and recommending protective actions for the public within the plume exposure EPZ. Specify the evacuation routes to be used in an emergency. Discuss sheltering and evacuation plans for the EPZ. Define the size of the plume EPZ limit, specifically noting what portions of the EPZs fall onsite and offsite. Describe the exposure pathways. Describe conditions, procedures, and authorities for evacuation of local populations.

Describe the ingestion pathway EPZ. Identify the persons (positions) responsible for determining and recommending protective actions for the public within the ingestion pathway EPZ.

7.7 Communication

Describe the communications to notify other Federal, state, local, private, and tribal organizations of the necessary actions required for their protection or for which they are responsible for informing the public or otherwise need to take action. Define and list, if necessary, sources of information used by Federal, state, local, and tribal organizations in further determining their course of action.

7.8 Termination of Protective Actions

Describe how protective actions are lifted or modified, authorities for removal of protective actions, how this information is communicated, both onsite and offsite, and how the activity is accomplished. Describe any post emergency communications or follow-up actions.

7.9 Shutdown of Operations

Describe the system to ensure safe shutdown of operations following the declaration of an emergency.

8. EMERGENCY MEDICAL SUPPORT

Describe the medical capabilities available onsite and offsite to respond to an emergency.

8.1 System

Describe the onsite organization of medical care for managing injured and/or contaminated personnel. Describe the onsite medical care and facilities. Describe the provisions in place to ensure coordination among medical, industrial hygiene, health physics, environmental response, security, and management personnel during emergencies.

8.2 Staff

Identify the lead medical emergency director. Describe the staff available both permanently and on call, outlining qualifications and training required. State the minimum requirements for offsite medical assistance including contractual arrangements and offsite staff training requirements.

8.3 Equipment

Describe the health services available onsite and offsite for response to emergencies. Describe the equipment available for extrication, rescue, and transport of injured personnel. Describe the onsite facilities and equipment for decontamination of injured personnel. Describe the equipment available for bioassay and whole body counting. Identify the types of medical supplies maintained onsite and any special equipment maintained offsite for emergencies. Describe how the quality and quantity of these supplies are determined, maintained, and ensured.

8.4 Transportation and Evacuation

Describe the transportation and evacuation capabilities, equipment, and the process for moving contaminated and noncontaminated casualties. Identify

person/positions with responsibility and authority for evacuation of injured or ill personnel.

8.5 Communications

Describe the communications procedures in place for emergencies. Identify the persons/positions responsible for notifying emergency medical teams, security, administration, offsite hospital and offsite emergency services.

9. EMERGENCY TERMINATION AND RECOVERY

Describe the plan and criteria for declaring the emergency condition terminated and transitioning to recovery at each facility, where applicable, and for the entire site, and identify all termination and recovery plans. The plan includes termination authority and responsibility and recovery criteria for protection of workers and the general public from hazardous exposure, exposure guides for recovery personnel, facility accessibility, security considerations, access to protective clothing and equipment, availability of medical assistance, and requirements for establishing the recovery organization. Reference technical supporting documentation if applicable.

9.1 Emergency Termination

Describe the procedure for terminating the state of emergency, including the personnel responsible for decision-making and their relationship to the overall emergency organization described in Chapter 2 of the plan. Address the special circumstances of an error in initial categorization that necessitate an emergency downgrade. Describe the conditions, or state the document, under which the emergency may be terminated and initiation of recovery activities may occur.

9.2 Recovery

Describe the recovery (transition) process from an emergency condition to the restoration of a safe, pre-emergency environment. Discuss the plan to restore vital systems, such as power, water, and communications. Include a discussion of the areas that must be verified for safety, such as fire hazards, toxic gas, and radiation. Describe the measures taken to ensure that security procedures are maintained. Describe the continued recovery (transition) process from a safe environment to the pre-emergency conditions.

9.2.1 Recovery Organization

Describe the recovery organization and the authority and responsibility chain of command that restores pre-emergency conditions. Describe how this organization may differ from the emergency organization described in Chapter 2. Describe the plan, either here or in Chapter 10, to notify the media and the public as to the condition of the emergency recovery.

10. PUBLIC INFORMATION

Describe the program to provide information concerning the emergency to the media and the general public, including information release approval. State the recommended time requirements for information release.

10.1 Public Information Organization

Describe the organization, including the relationship to the overall emergency organization, which will be used to disseminate information to the media and the general public. State the personnel authorized to release information, including the designated spokesperson.

10.2 Public Information Facilities

Describe the facilities and communications equipment used to disseminate information to the public. Include meeting rooms, press areas, and communications facilities.

10.2.1 Joint Information Center

Describe the function and staffing of the Joint Information Center (JIC). Discuss the coordination roles at the JIC (both onsite and offsite).

10.3 Public Education

Describe the public education program to inform the public and the workers as to the dangers present, and information that can be used for emergency actions, including recommended evacuation routes and sheltering.

10.4 Public Inquiries

Describe the plan to respond to public and worker inquiries, including rumor control.

10.5 Security

Describe the plan to ensure that security is not being compromised with the release of sensitive or classified information to the public.

10.6 Field and Headquarters Coordination

Describe the plan to coordinate with the operations/field office and Headquarters on the release of information to the public.

11. EMERGENCY FACILITIES AND EQUIPMENT

11.1 Emergency Facilities

List and provide a brief description of the following facilities. Distinguish between dedicated and non-dedicated facilities. Maps and floor plans of facilities should be used when it will benefit in providing a complete description of the facility.

11.1.1 EOC or Command Center

11.1.2 Alternate or Secondary EOC

11.1.3 Emergency Response Facilities

11.1.4 Technical Support Center

11.1.5 JIC

11.1.6 Offsite Communications Center

11.1.7 Decontamination Facilities

11.1.8 Medical Facilities

11.1.9 Security Control Centers

11.2 Emergency Equipment

List and describe the equipment likely to be used for responding to emergencies. Include in the list: equipment capability and limitations, quantity of equipment, locations (both fixed and portable equipment), consumables, maintenance requirements, certification requirements, expiration dates, and computer/communications compatibilities.

11.2.1 Communications Equipment

11.2.2 Heavy Construction Equipment

11.2.3 Decontamination Equipment

11.2.4 Alarm Equipment

11.2.5 Rescue Team Equipment

11.2.6 Sanitation and Survival Equipment

11.2.7 Transportation Equipment

11.2.8 Personnel Protection Equipment

11.2.9 Gas and Liquid Monitoring Equipment

11.2.10 Damage Containment Equipment

11.2.11 Fire Fighting Equipment

11.2.12 Emergency Power Equipment

11.2.13 Logistic Support Equipment (maps, plans, etc.)

12. TRAINING AND DRILLS

Describe the goals and objectives of the training and drills program.

12.1 Courses

List the available courses for emergency planning and analysis, including title, length of course, target audience, a brief summary, and the periodicity or schedule.

12.2 Training Requirements

Describe courses given to emergency management personnel. Identify training requirements for key emergency management positions and response teams. Identify periodicity of courses and employee requirement for training and retraining or refresher training.

12.3 Examination

Describe the examinations, if any, required for emergency response organization personnel qualification.

12.4 Record Keeping

Describe the system of record keeping to verify training requirements are met.

12.5 Offsite Personnel

Describe the system of training available to and required for visitors, vendors, and subcontractors.

12.6 Offsite Training Support

Describe the available training resources available offsite which can substitute or complement existing training courses.

12.7 Offsite Personnel Training

Describe the in-house training available to offsite organizations in order to support their abilities to participate in site emergency response actions. Describe training available, if any, for the general public.

12.8 Instructor Training and Qualification

Describe the plan to provide qualified instructors for the available training and the qualification of instructors, including instructor training courses.

12.9 Drills

Describe the drill program, per DOE O 151.1, including the goals, frequency, complexity, and integration of lessons learned into emergency planning. Describe how the drills develop expertise in emergency activities such as notification, communication, fire control, medical planning, and HAZMAT.

12.9.1 Evaluation and Corrective Action

Describe how drills will be controlled and evaluated, and how lessons learned from drills, improvements, and/or corrective actions, are incorporated into emergency planning.

13. EXERCISES

Discuss the intended purpose of the exercise program.

13.1 Exercises

Describe the emergency management exercise program and how it conforms to the requirements of DOE O 151.1 and any applicable state and local legislation.

13.1.1 Evaluation and Corrective Action

Describe how exercises will be controlled and evaluated, and how lessons learned from exercises, improvements, and/or corrective actions, are incorporated into emergency planning.

13.2 Offsite Coordination

Describe the method of coordination with DOE Headquarters and participating Federal, local, state, tribal, and private organizations for drill or exercise planning, and the level of participation.

14. PROGRAM ADMINISTRATION

14.1 Emergency Management Program Administrator

State the name, position, mailing address, and telephone number of the Program Administrator at the site or facility level. (This information should also be listed in the appendix which lists the emergency management personnel.) Indicate, where appropriate, whether the Program Administrator has been given emergency management responsibility through delegation of authority.

14.2 Document Control

State the procedure used to control the Emergency Plan and to assure annual review and update.

14.3 Self-Assessment

Describe the site internal assessment program, which requires an internal assessment to be conducted annually.

Appendixes
List of Figures
List of Tables
List of Acronyms
List of Definitions
Agreements
Maps
Listing of Emergency Management Personnel
References

2.4 Bibliography

DOE O 151.1 Chg 2. Comprehensive Emergency Management Program. August 21, 1996.

DOE O 232.1A. Occurrence Reporting and Processing of Operations Information. July 21, 1997.

Title 61 FR 28642. National Response Team's Integrated Contingency Plan Guidance. April 18, 1996.

3. EMERGENCY READINESS ASSURANCE PLANS (ERAPs)

3.1 Introduction

Readiness assurance includes the necessary assessments and documentation to ensure that stated response capabilities are sufficient to implement emergency plans. Emergency Readiness Assurance Plans (ERAPs) provide documentation of the emergency planning and preparedness activities for each site/facility.

Each ERAP serves as the baseline document for emergency readiness assurance evaluations and as a planning tool to identify and develop necessary resources and improvements. All updated plans should highlight any changes in planning bases, organizations or exemptions from previous ERAPs, as well as a comparison of actual achievements to goals, milestones, and objectives.

The ERAP is designed to be an emergency preparedness management tool for all levels of management. ERAPs should provide the appropriate level of information and analysis to be an effective tool for managers at each level. For example, a facility or site ERAP will, by design, have more detail than a DOE operations/field office's compilation ERAP.

This chapter discusses the process for developing and documenting the ERAP. The content and format for the ERAP for a Base Program and Hazardous Material Program is described, including recommendations on sections and information to be included, as well as suggested length and presentation of information.

Base Program. Section 3.3.1 provides a recommended format and content for a Base Program site/facility ERAP. A Base Program for a facility which is more extensive than an office building, for example, may need an ERAP which includes entries comparable in detail to the ERAP for a Hazardous Materials Program.

3.2 Coordination and Approval Process

The formal, hierarchial process of documentation prescribed in DOE O 151.1 is intended to ensure coordination among programmatic emergency management elements consistent with organizational responsibilities. The ERAP development process should follow organizational alignment. The consolidated ERAPs will be used as the basis for the annual status report to the Under Secretary. All elements of DOE with emergency management

responsibilities should follow the ERAP submittal and review process as closely as possible.

Facility. ERAPs should be prepared under the direction of the manager/administrator of each DOE- or contractor-operated facility, operation, or activity. ERAPs should then be submitted to the respective operation/field office by September 30 of each year. For facilities on a multiple facility site, consideration should be given to advancing the facility submission date to allow preparation of the site ERAP discussed below. The ERAP should discuss activities conducted in the fiscal year ending September 30, as well as those planned for the next five fiscal years.

Site. For a multiple facility site, emergency preparedness activities are normally conducted within the context of the entire site. For this reason, each facility manager should prepare an ERAP and submit it to the manager/administrator responsible for the overall site. The manager/administrator for the overall site will then prepare an ERAP for the site. The site ERAP should discuss the site emergency preparedness program and summarize the program described in each facility ERAP. The site ERAP should be submitted to the respective operations/field office by September 30 of each year and will cover activities conducted in the fiscal year ending September 30, as well as those planned for the next 5 fiscal years. The manager/administrator of the overall site may require individual facility managers to submit their ERAPs earlier than September 30 to allow preparation and submission of the overall site ERAP by September 30.

DOE Field Element. Based on the ERAPs submitted by multiple facility sites and independent facilities, the operations/field office should prepare an ERAP that covers the operations/field office emergency preparedness program and summarizes the programs at each multiple facility site and independent facility. The ERAP should discuss activities and major accomplishments conducted in the fiscal year ending September 30, as well as those activities planned and the anticipated goals and objectives for the next 5 fiscal years. The operations/field office ERAP is due to the Director of Emergency Management (NN-60) and the Cognizant Secretarial Officer by November 30 of each year.

Director of Emergency Management. Using the ERAPs submitted by the operation/field office the Director of Emergency Management prepares an annual report that summarizes the status of the emergency preparedness program within the Department. This report should be coordinated with the Cognizant Secretarial Officers. The report is due to the Under Secretary by April 30 of each year.

3.3 Content and Format

The ERAP is intended to convey information briefly and succinctly. Operations/field office ERAPs should summarize and analyze information provided by facility ERAPs. Each section of the ERAP should be organized to separate information into the following general categories.

- Background material and procedures not subject to frequent changes.
- Information updated annually (e.g., reports on the activities and accomplishments of the past year and plans, schedules, and budgets for the next 5 fiscal years).

Because ERAPs are designed to be management tools, all ERAPs should use tables whenever practical to consolidate and summarize information. Facility/site ERAPs should typically be on the order of a few tens of pages, with consolidated ERAPs (operations/field office and Headquarters) on the order of 20 pages in length. Base Program ERAPs could vary from less than ten to a few tens of pages. The document length will depend on the amount of detail included and the number of facilities/sites covered.

3.3.1 Base Program ERAP

The format and content described in this section apply to DOE sites/facilities not required to develop and maintain an Operational Emergency Hazardous Material Emergency Program, based on the results of their Hazards Survey. The following categories should be included in a Base Program ERAP as a minimum.

Executive Summary. Summarize the overall status of the emergency management readiness assurance program for the entire site or facility.

Program Description. Include the site description and mission and reasons for classification as a Base Program site. This should include results from the Hazards Survey.

External Coordination. List all coordination actions with offsite emergency response agencies if applicable.

Training and Drills. List all related training programs, to include GET, fire drills, or any other related training programs that are required. Provide a brief description of topics

covered during training and include all annual training requirements for any emergency response personnel on site. Any conditions prohibiting training should also be cited here.

Evaluations, Appraisals, Assessments. Briefly describe any evaluations, appraisals, or self-assessments conducted or planned over the next fiscal year. List all evaluations or appraisals by offsite response agencies (e.g., DOT, fire department).

Resource Requirements. Project the requirements for emergency management dedicated personnel, resources, and equipment for the next 5 fiscal years. In a table show the number of full-time employees or percentage thereof, the number currently working, the estimated emergency management costs for the next 5 fiscal years, and the amount spent in the last fiscal year.

Other. Discuss any concerns pertinent to the emergency readiness assurance program, especially site/facility-unique items. State and local issues regarding the Emergency Management Program should also be included.

3.3.2 Hazardous Material Program ERAP

The Hazards Survey results for facilities will determine the requirement for an Operational Emergency Hazardous Material Program. As a minimum, ERAPs should contain the following sections, including the information as defined below.

Executive Summary. Summarize the overall status of the emergency readiness assurance program for the entire site or facility. This brief summary should allow senior management to obtain information about program status. Previous emergency management knowledge should not be assumed. Key management review areas such as resource requirements and corrective actions should be addressed. Extensive background information and historical data available to line management in other documents should not be included.

Program Description. Describe the emergency readiness assurance program in sufficient detail to document program adequacy. The program description should address site description and mission; status of emergency preparedness plans and implementing procedures; concept of emergency operations; Emergency Response Organization (ERO) components and status; and number of full-time emergency preparedness personnel.

Exemptions. List any approved or requested exemptions to requirements of the DOE Emergency Management System. Exemptions to DOE O 151.1 requirements are

approved by the Under Secretary, with the concurrence of the Director of Emergency Management and, if appropriate, the Assistant Secretary of Environment, Safety and Health. Exemptions should be coordinated with the Associate Deputy Secretary for Field Management, if appropriate. The list should state why the exemption was requested, when it was approved, and the duration of the exemption. Changes to previous exemptions should be highlighted in this section.

Hazard Surveys/Hazards Assessments. Emergency Management Programs are to be commensurate with the hazards of the facilities, activities, and operations. The following information is needed.

- The status of the Hazards Surveys and Hazards Assessments, including completion date. If a survey or assessment has not been completed, state the plan to correct this, the estimated completion dates, and the subsequent event categorization/classification criteria (e.g., EALs).

- Briefly discuss the range of Operational Emergencies, including potential radiological and nonradiological emergencies applicable to the site, facility, or operation, with references to appropriate resource documents. List and describe the types of potential emergencies, to include initiating events and the basis used in determining identified hazards. Worst-case scenarios should be addressed.

External Coordination. Summarize all coordination actions taken with external emergency response organizations and resources. A list of appropriate current or in-process memoranda of agreement, mutual aid agreements, or memoranda of understanding with these organizations should also be included. Initiation, revision, and expiration dates for each of these should also be provided in a table, if appropriate. Noteworthy external participation in training, drills, or exercises should also be included.

Training, Drills, and Exercises.

- List training programs designed to meet individual needs as well as specialized team training and drills. Using a table, if appropriate, show the number and percent of ERO members trained by ERO position or as a team.

- Specific reference should be made to training plans and goals for the current and next fiscal year.

- The exercise program should be discussed in this section. The overall objectives of the exercise program for the subsequent 5 fiscal years should be described. A table, showing projected dates for exercises, is appropriate. For the current and next fiscal year (and subsequent years, if known), identify the major purpose of the exercise and the type of hazard simulated during the exercise. Include information on the use of exercise results and training course critiques to improve plans, procedures, training, and exercises. Include a summary of significant open exercise findings.

- Any conditions prohibiting training requirement fulfillment should be cited here, as well as in the exemptions section.

Evaluations, Appraisals, Assessments. Discuss the scheduling of evaluations and appraisals for the current and next fiscal year and, to the extent feasible, for a 5-fiscal-year period. The organizations conducting each evaluation or appraisal and their objectives should be clearly identified. Information on self-assessments may also be included and should be clearly identified. Evaluation and appraisal findings should be contained in the section on findings and corrective actions.

Findings and Corrective Actions. With a focus on major findings, summarize outstanding evaluation/appraisal findings, citing the corrections assigned as well as those validated as resolved during the past fiscal year. Identify the priority for completion and estimated completion dates for correction of open, major findings. Related findings and corrective actions should be consolidated as much as possible. A verbatim statement of findings and corrective actions from previous reports is not appropriate for an ERAP.

Resource Requirements. Project the requirements for emergency management dedicated personnel, resources, and equipment for the next 5 fiscal years.

- Include information regarding emergency management budget support systems, funding/appropriations, related training, and facilities/response elements necessary to maintain an appropriate level of emergency preparedness. This list should include necessities developed from actual operational needs such as EOC equipment, field monitoring equipment, and Radiological Assistance Program Team equipment. This section should be done in table format and should not include nonemergency items, such as those pertaining specifically to safety (e.g., Safety Analysis Reports). The budget table should also include a column for the amount of funds spent on emergency management items and personnel last year. This section may require DOE elements and operating contractors to extrapolate

budget information from other budget areas when emergency management items fall under another line item. This section should clearly identify resources required and currently funded.

- In table form, if appropriate, outline the emergency management personnel required and those currently available. Information on personnel should distinguish full-time emergency management personnel from those assigned additional duties.

Other. Discuss concerns pertinent to the emergency readiness assurance program, especially site/facility-unique items. State and local issues and concerns should be included in this section, if not already covered. The focus should be on projected conflicts, future concerns, or issues that need senior management resolution or attention. Any discussion of a concern should present suggestions or methods to resolve the issue.

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4. TRAINING AND DRILLS

4.1 Introduction

DOE O 151.1 provides a framework to effectively integrate emergency planning and preparedness activities for a comprehensive, all-emergency management concept and to promote more efficient use of resources. Emergency Management training is often provided by different organizations. To ensure training programs are effectively integrated, managers responsible for training should be aware of related training programs and coordinate their activities.

DOE Emergency Management training programs ensure that personnel are prepared to respond to, manage, mitigate, and recover from emergencies associated with DOE operations. Training programs include both classroom instruction and hands-on experience. Participants include personnel assigned to the facility/site Emergency Response Organization (ERO), onsite response personnel (i.e., fire, medical, security, health physics, industrial hygiene, hazardous material, etc.) general employees, and members of offsite response organizations.

General training for employee response, required as part of the Operational Emergency Base Program, could be included as part of an employer's General Employee Training (GET) Program. Emergency-related information includes emergency awareness, warnings and alarms, evacuation, accountability, and first aid. Employees assigned to specific responsibilities for onsite emergency response receive additional training**.**

The Operational Emergency Hazardous Materials Program necessitates a coordinated program of training and drills for developing and/or maintaining specific emergency response capabilities for all personnel and organizations that the site/facility expects to respond to onsite emergencies. This training program consists of a combination of self-study/homework, formal classroom training, and drills. Both initial and annual refresher training should be provided for the instruction and qualification of all personnel (primary and alternate) comprising the ERO. Emergency-related training should also be made available to offsite response organizations.

This Chapter provides guidance on program planning, development, implementation, evaluation, documentation, and records maintenance. The user will be introduced to the key elements necessary to define and implement a successful training and drill program. The majority of guidance focuses on the more extensive needs of a Hazardous Materials Program, but provides useful considerations for the needs of a Base Program.

Base Program. All workers who may be required to take protective actions (e.g., assembly, evacuation, shelter) are to be provided with initial training and periodic drills. Training should be provided at the time of employment, when expected response actions change, or when the emergency plan changes. Initial and annual refresher training should be provided to certified operators and supervisors, workers who are likely to witness emergency conditions, those required to notify proper authorities, and workers required to attain "First responder awareness level," as described in 29 CFR 1910.120. In addition, emergency-related information and training on site-specific conditions and hazards should be made available to offsite personnel who may be requested to respond to an emergency at the DOE site/facility. Section 4.2 provides guidance on topics to be covered by Base Program training activities.

4.2 Training Program Plan

The Emergency Management System Program Administrator should produce and annually update the Training Program Plan to assure that the program is accurate and focused on the site/facility personnel knowledge and performance needs for both the Operational Emergency Base Program and the site's Hazardous Material Program.

Base Program. If only the Operational Emergency Base Program is required for a site, then Emergency Management training responsibilities may be within the purview of the GET Program. Training for a Base Program should include information in the following areas:

- Overview of the Emergency Management Program for the facility, including information on emergency response organizations
- Emergency plans and procedures, including notification protocols and alarms/warning systems for work areas
- Employee accountability, response procedures, and protective actions

Training required under the Base Program, but not covered by GET, should be provided for individuals based on job responsibilities. A site/facility may be required to conduct hands-on training in the form of emergency drills, in accordance with Federal, state and/or local laws and regulations.

Emergency Management training that is incorporated into GET should be documented through that program. Separate documentation should be maintained for any additional training or retraining that is not included in GET.

The remaining sections in this chapter provide useful information for Base Programs, especially those more extensive than a minimal Base Program.

Hazardous Material Program. Operations/field office managers are required to ensure that Operations/Field Offices and contractors participate in a continuing program of training sessions/courses and drills as an integral component of their overall emergency preparedness program. The proficiency developed through the training program should be tested by a separate exercise component of the emergency preparedness program. The training program should be designed to instruct personnel (primary and alternate) included in the facility ERO and should provide for sites/facilities activities within their cognizance. The training program should be "commensurate with the hazards" identified in the Hazards Assessments. The individual training program should be commensurate with assigned emergency response responsibilities. Training topics should reflect the functional position and responsibilities of the trainee. Appropriate topics to be considered include, but are not limited to:

- Emergency facilities and equipment;
- Management and decision making;
- Basis for Protective Action Recommendations (Hazards Assessments/consequence assessment);
- Consequence assessment/dose projection;
- Notifications/communications;
- Emergency categorization and classification;
- Protective actions/protective action recommendations;
- Activation and coordination of response resources;
- Coordination and liaison with offsite response and support organizations;
- Control of onsite emergency activities;
- Emergency medical support;
- Emergency public information;
- Field monitoring; and
- Program administration.

4.2.1 Management and Administration

The general responsibilities of the Program Administrator are discussed in Volume V, Chapter 1. The Program Administrator at a facility/site has overall responsibility for the development of the Emergency Management Program, including emergency management training. The Emergency Management Program Administrator may delegate responsibility for training program management but should retain oversight and approval. The Emergency Management Program Administrator (or, if delegated, the emergency management training program manager) should ensure the following.

- Develop a comprehensive emergency management training plan.
- Identify and coordinate adequate resources for program implementation, including facilities, equipment, budget, etc.
- Identify training needs and provide for development, scheduling, and delivery of training activities.
- Maintain access to a qualified training staff.
- Coordinate record keeping.
- Conduct periodic self-assessments, including evaluating instruction and reviewing materials.

4.2.2 Program Objectives and Guidelines

A coordinated program of training and drills must be in place to develop and maintain the required emergency response capabilities. This program must include all personnel expected to respond to an emergency. Qualification standards will affect the type, amount, frequency, and costs of training. Both initial and annual refresher training are required for qualification of all personnel (primary and alternate) in the emergency response organization. All personnel (primary and alternate) should participate in at least one drill or exercise annually.

Annual refresher training may be shorter for persons who have filled the response role for a number of years. Requalification may be limited, in these cases, to discussion of changes in requirements or procedures, lessons learned from actual and exercise events, and participation in an annual drill or exercise.

Training should be based on and consistent with elements of the Emergency Management Program. Every attempt should be made to develop training that incorporates these elements as information and guidance becomes available. The training program should include a mix of classroom instruction, tabletop activities or walk-throughs, and drills. Drills can provide "hands-on" instruction for emergency responders.

Specialized team training should be provided for personnel who function as members of emergency field response teams and should be considered for other functional groups within the ERO, such as the Consequence Assessment Team. Such training should be provided annually to individuals who regularly respond as a team, as well as to individuals who function as alternate team members. Training should address emergency tasks that require team efforts for response and mitigation as well as general team-building skills. Drills should address response scenarios that are realistic for the facilities involved, and response teams should drill as a unit to the extent possible.

Facility-specific orientation training on hazards and emergency response procedures should be offered annually to offsite state, tribal, and local emergency response organizations. Training should be offered annually to all parties (Federal, state, tribal, and local agencies, and DOE and DOE contractor facilities) of mutual aid agreements for emergency events.

A streamlined, standardized qualification process should be established for personnel with experience in a closely related industry. The same process should apply to new personnel who have transferred from other DOE sites and contractors. The feasibility of streamlined qualification must be evaluated on a case-by-case basis and documented by proof of experience (assignments, training and qualification records, references, etc.). Some additional training will always be required, because new personnel will have to become familiar with the facility-specific hazards and procedures. These personnel should receive any necessary training and participate in drills as determined by the qualifying authority.

4.2.3 Training Program Plan Contents

An emergency management training program plan should be developed to provide a systematic view of program goals, organizational responsibilities, resources, and planned activities. The plan should include the following.

- **Emergency Management Training Program Goals.** The emergency management training program should be fully described in the training plan, which

should be reviewed annually to ensure adherence to assigned goals and objectives and compliance with requirements and administrative policies and procedures.

- **Outline of Training Activities.** An annotated listing of the courses and drills provided by the emergency management training program, along with the terminal objectives for each activity, should be included in the training plan.

- **Resources and Facilities.** The training plan should include a list of needed resources and facilities (e.g., classroom space, laboratories), equipment (e.g., radios, protective clothing), and reference material to support training activities.

- **Qualification and Requalification Requirements.** Standards for successful completion of each training activity and requirements for updating, retraining, and remedial training should be established and stringently enforced. These standards and requirements should be described in the training plan.

- **Description of the Emergency Management Training Organization.** Emergency management training may be a subset of overall facility training. A description of the overall training organization should be maintained and included in the training plan.

- **Target Audience.** Position-specific descriptions should be developed and include training for support staff, emergency response personnel, and specialized teams. The training plan should identify the audience requiring training and the process for identifying and documenting the training needs of the audience.

- **Schedule for Training Activities.** A schedule for developing, delivering, and evaluating training activities should be developed and updated as needed. The schedule should be made available for use in the training section of the facility ERAP.

- **Materials Review and Approval Requirements.** Signature requirements verify that training materials have been reviewed and are acceptable to those who sign off on them. DOE facilities already have signature requirements that can be adapted to specific administrative needs of the emergency management training program.

- **Training Documentation and Record Keeping Requirements.**

  – A consistent, auditable method of maintaining records should be identified in the training program plan. The record keeping system should include files of course materials, which serve as a tracking method for course content.

  – The record keeping system should include a means for tracking attendance, student status, and scheduled training including a system for reminding employees when training is needed.

  – When possible, emergency management training records should be incorporated into central training records for the facility.

- **Instructor qualifications.** An instructional training and qualification program description for emergency management instructors/trainers, including part-time, contractual trainers (consultants) and offsite training support, should be developed, administered, and maintained. Training staff personnel must maintain their technical and instructional competence through a continuing training program, as described in the appropriate program description.

- **Analysis and design.** Training activities including classroom instruction, computer-based instruction, tabletop "role-play," and drills should be based on a systematic approach. A graded approach and performance-based principles should be used to establish the systematic approach. The methodology for analysis and design of the training system should be described in the Emergency Management Training Program Plan.

- **Position-specific training matrix.** A position-specific training matrix should show required training topics for facility ERO positions. The training matrix should identify onsite and offsite audiences and topical requirements.

- **Training implementation matrix.** The plan should include a training implementation matrix that clearly shows the relationship between the selection and qualification requirements for personnel with emergency management responsibilities and their training requirements. The matrix should illustrate how the technical qualification program at a site/facility and the training program work together to satisfy the knowledge and performance needs of the emergency management program.

4.3 Training Development

Needs analysis. A needs analysis should be performed to identify the differences between what ability levels are required and the ability level of ERO personnel. The regulatory needs analysis should include training and drill requirements for responders established by DOE and other agencies (see Section 4.7 for some sources.) A job analysis should be performed to determine the position-specific tasks for training. A needs analysis should be performed to identify the differences between what ability levels are required and the ability level of ERO personnel

Learning objectives. Learning objectives should be developed from training needs analyses and should identify and address the knowledge and skills necessary to perform the position-specific responsibilities.

Qualification Standards. A standard is necessary to determine whether the knowledge or skills have ben learned well enough that trainees will remember and perform the task in a future emergency. Standards address the question: How good is good enough? Since standards may be different for different tasks, setting standards requires considering the consequences of unsatisfactory performance, as well as the importance, difficulty, and frequency of practice or use of the knowledge or skills.

Lesson plans. Lesson plans should be derived from the training needs analyses and should undergo a thorough review and approval process. Lesson plans should reflect good instructional design and maximize knowledge and skill retention. Lesson plans should be sufficiently detailed to ensure consistency of instruction between instructors and facility training offices, as appropriate. The lesson plan should identify trainee prerequisites, course duration, learning objectives, instructional aids, and presentation and evaluation methods.

Training materials. Effective training materials should support and reinforce the learning objectives. Training materials should emphasize or replicate position-specific information and situations. The level of detail should take into account the emergency management member's position and experience and the experience of the designated instructor. Training materials may include handouts, audio/visual aids, trainee workbooks, or other items.

Trainee manuals. Trainee manuals that contain handouts, objectives, worksheets, etc., should be available during training to support classroom or computer-based instruction. Trainee manuals should contain key points and display a "For Training Use Only"

disclaimer. Students should be reminded that the trainee manual is not a procedures manual.

Qualification and testing. Training and drills should conclude with some form of measurement or demonstration that indicates completion of training objectives and achievement of qualification standards. A comprehensive written examination may be developed consistent with Emergency Management Program/position qualification requirements. The examination should contain a representative selection of test items identified from the learning objectives developed from the job and/or task analyses. Testing materials should be varied (e.g., through use of randomly selected question examination banks) to ensure long-term validity of the examinations. For some skills, demonstration of simulated response activities may be adequate to determine trainee qualification. In general, annual exercises represent an effective evaluation instrument of training program effectiveness.

New course evaluation. Training programs should be evaluated for the adequacy of program and lesson content, examinations, presentation, documentation, and post-training performance. The evaluation process determines individual strengths and weaknesses, improves program content and delivery, and ensures that revisions have been made as appropriate. Development of new courses should include evaluation and validation of the effectiveness of course materials through use of pilot presentations, peer reviews, and/or review by subject matter experts.

4.4 Training Implementation

4.4.1 Training Product Distribution

Training products may be distributed in a number of ways. These methods vary widely in cost per student, effectiveness for training groups versus individuals, ease of scheduling, breadth of distribution, and level of achievement.

Commonly used methods include the following.

- Live delivery at central training location.
- Live delivery at home site of audience.
- Train-the-trainer presentation (with supplied training packages).
- Delivery by “trained trainers” (unassisted or assisted).
- Outside study using workbooks and videotapes.
- Computer-based (diskette or CD format) self-paced learning.

- Live closed-circuit television.

4.4.2 Training Delivery

The type of delivery selected for emergency management training courses should be based on the learning objectives and the nature of the teaching and learning tasks. To be effective, training programs should combine classroom presentation and student participation methods, with the use of experiential sessions whenever possible. Realism should be maximized, within the constraints of safe facility operation and trainee safety (e.g., personnel should actually wear protective equipment while performing drills in simulated hazardous material fields).

A variety of presentation types are available for classroom-style delivery. Such methods are well suited to present fundamental and theoretical knowledge. These methods include the following.

- Live lecture.
- Live demonstration.
- Live video lecture/demonstration.
- Videotaped lecture/demonstration.
- Computerized lecture/demonstration (diskette or compact disk).

Student involvement is very effective in a group learning environment and to ensuring that a class as a whole has achieved a similar level of knowledge. Such methods are extremely valuable for training requiring physical skills or the use of response equipment. Student participation methods include the following.

- Lecture with student input required.
- Student reports/presentations and projects.
- Facilitated group discussions.
- Group tasks.
- Student-assisted demonstrations.
- Team task assignments.
- Tabletop training activities.
- Hands-on drills
- Interactive computer programs.
- Assigned/acknowledged reading.

Class/group size will determine the appropriateness and effectiveness of some of these interactive methods. The size of the class should be controlled to maximize instructor/trainee interaction on course material. Trainee feedback and student evaluations should be considered in modifying and improving courses.

4.4.3 Tabletop Activities

Tabletop activities provide a focused, cost-effective training experience. These activities may range from lecture and guided discussion to a detailed verbal simulation of a response to a particular scenario. A verbal walk-through of the response to a facility-specific scenario is a good way to provide an overall orientation and clarify participants' perceptions of their roles. Objectives for the tabletop will determine the focus of the activity (overall coordination versus detailed problem solving). A tabletop requires significant preparation to ensure that objectives can be satisfied. Because of the inherent flexibility of this approach, trainers are free to structure the training experience creatively, controlling scenario time and trainee activity. It is important to select a skilled instructor or moderator to maximize the benefit from this training experience. Additional training staff may be desired to facilitate or record the training session. A recorder can be used to note questions and problems so they may be addressed later through new procedures, agreements, or training. If the tabletop involves multiple response groups or a detailed or highly technical scenario, representatives of the involved agencies or technical specialists should be involved in the planning.

4.4.4 Drills

Drills are supervised hands-on instruction and application sessions for individuals or teams. These sessions provide an opportunity to demonstrate and maintain individual and organizational proficiency. Drills should be of sufficient scope, duration, and frequency to ensure adequate training for all elements applicable to the facility. The size and complexity of any drill will depend on the objectives. Many drills will be functional, focusing on training responders involved in a specific response function (e.g., formulating protective action recommendations, medical response, etc.). Drills can range from hands-on instruction in one simple procedure to a multi-organizational, scenario-driven event. The distinction in DOE activities between a drill and an exercise is that the primary purpose of a drill is training, not evaluation of the response activity.

Drills have three phases: planning, conduct, and evaluation. They should be as realistic as possible. Because the focus of the drill is training, some aspects of drill conduct can be more flexible than an exercise. Some roles may be combined, and the controller may be

free to stop and correct the responders' actions during the response. In a small drill, one person might plan, conduct, and evaluate the drill. Safety and security plans may be required. A drill that has the potential to affect the offsite population (e.g., offsite field monitoring team) should be planned to avoid public concern or inconvenience.

4.4.5 Training Schedule

A coordinated training schedule should be developed for training classes, exercises, and drills.

4.5 Training Evaluation and Self-Assessment

4.5.1 Evaluations

Instruction and materials. The training program should include a process for collecting evaluations of the course materials and the presentation. These evaluations should be used as a basis for course revision. Tabletops can be used to verify and validate training program components.

Performance. Evaluations of performance during an exercise or actual response should be used to evaluate the effectiveness of the training program. Evaluators, controllers, and players should identify problems noted during the response. Any necessary corrections in response procedures should be incorporated into initial and annual refresher training.

4.5.2 Self-Assessment

Self-assessment is an important tool for maintaining and improving the emergency management training program. The Emergency Manager, or designee, should conduct periodic assessments of the training program to ensure that all members of the emergency response organization are trained or qualified in pertinent aspects of emergency management. Emergency management training documentation should be reviewed during self-assessment. Results of the self-assessment activities should be used to improve the emergency management training program.

4.6 Training Documentation and Records

Maintaining proper program documentation is essential to providing complete and accurate records of both the emergency management training program and the qualifications of facility emergency management employees. Documentation for the

emergency management training program includes both the administrative records for the program and individual training records. Administrative records are used to show how the training program has been developed, reviewed, analyzed, evaluated, and maintained. Individual training records are necessary to document the training and qualification of members of the ERO.

Both administrative and individual training and qualification records must be kept for all personnel who have an assigned response role.

Training program records should include, but are not limited to the following.

- Administrative guides.
- Evaluation materials for training staff and trainees.
- Records documenting development of performance-based training.
- Evaluations of drills and exercises that relate to training (validation of training, recommendations for changes in training, etc.).
- Evidence of satisfactory completion of training (attendance, test results, etc.).
- Documentation of instructor qualification.
- Results of self-assessments.

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